⊕EPA

Full Cost Accounting for Municipal Solid Waste Management: A Handbook

Amortization

Cost

Depreciation

Overhead

Contents

About This Handbook

EPA developed this *Handbook* to help you implement full cost accounting (FCA) in your community. The *Handbook* will help you better understand the costs of the municipal solid waste (MSW) services you provide, answer key questions you might have about FCA, and guide you through the implementation process. You'll learn how to assemble necessary data, calculate full cost information from the available data, and report the results of your FCA analysis to government officials and residents. Case studies, presented in boxes throughout the *Handbook*, provide snapshots of how other communities across the country have implemented FCA and are reaping its rewards. Key terms and concepts are italicized on first reference, and their definitions are included in the Glossary.

This *Handbook* can answer only some questions about FCA. Because of the diversity of accounting practices and rules and differences in the size and nature of local government MSW programs, there is no single recipe for success. Rather, the goals of this *Handbook* are to introduce key FCA terms and concepts and to prepare readers for the types of issues that will likely arise in conducting FCA. The *Handbook* does not try to present step-by-step "how-to directions" on initiating an FCA system. It also does not provide detailed instructions for handling all issues that are likely to arise or recommend particular forms to use in compiling and reporting FCA for MSW. While economic concepts, such as fixed and variable costs, are illustrated in Chapter 5, the *Handbook* does not attempt to demonstrate how to apply economics to integrated solid waste management system decisions.

This *Handbook* focuses on costs that are relatively easy to value in the marketplace. Other important costs that decision-makers and planners might want to consider include potential liability costs for property damage or personal injury, costs of remediating potential future releases, social costs, environmental externalities, and upstream and downstream life-cycle costs. This *Handbook* defines and describes these costs, but does not explain how to value them or incorporate them into decision-making. Consideration of the full spectrum of costs can be called "true cost accounting," which is beyond the scope of this *Handbook*.

This *Handbook* is a first step toward helping you understand the costs of MSW management in your community. It builds on local government experience with FCA and reflects input EPA has solicited from a diverse national peer review group. EPA welcomes comments on the *Handbook*, as well as information about how using FCA has helped your community. Comments should be submitted to the RCRA Hotline at 800 424-9346 or TDD 800 553-7672. In the Washington, DC, area, call 703 412-9810 or TDD 703 412-3323. The Hotline is open Monday through Friday, 9:00 a.m. to 6:00 p.m., Eastern Standard Time.

Introduction

Full cost accounting (FCA) is a systematic approach for identifying, summing, and reporting the actual costs of solid waste management. It takes into account past and future *outlays, overhead (oversight and support service) costs,* and *operating costs.* Knowing the full costs of municipal solid waste (MSW) management can help you make better decisions about your solid waste program, improve the efficiency of services, and better plan for the future. FCA can help you compile the detailed cost information you need to understand what MSW management costs and to communicate these costs to the public.

As of July 1997, four states (Florida, Georgia, Indiana, and North Carolina) require local governments to use FCA in reporting MSW costs to citizens. In addition, the Texas Natural Resource Conservation Commission developed an FCA workbook to help municipalities determine rates that reflect the full cost of providing solid waste services. Many localities in other states are also applying FCA concepts and are finding them important and useful tools to help manage their solid waste programs.

FCA can be a new way of thinking about MSW management for some communities. For others, it can be simply an extension of current management practices. Understanding the benefits of FCA can help ease its implementation in your community. FCA can help you:

| **FCA Helps You Meet Your Goals** |

FCA supports your:

- **Informational goals** by determining and reporting how much MSW management costs.

- **Management goals** by identifying potential cost savings and providing a sound basis for management decisions such as privatizing services.

- **Planning goals** by documenting current benchmarks that can be used when making or evaluating projections.

- **Identify What MSW Management Costs**. When municipalities handle MSW services through general tax funds, the costs of MSW management can get lost among other expenditures. Even if an effort is made to identify solid waste costs, it is easy to overlook some of them. You can have more control over MSW costs when you learn what those costs are.

- **See Through the Peaks and Valleys in MSW Cash Expenditures**. Using techniques such as depreciation and amortization, FCA produces a more accurate picture of the costs of MSW programs, without the distortions that can result from focusing solely on a given year's cash expenditures.

- **Explain MSW Costs to Citizens More Clearly**. FCA helps you collect and compile the information needed to explain to citizens what solid waste management actually costs. Although some people might think that MSW management is free (because they are not billed specifically for MSW services), others might overestimate its cost. FCA can result in "bottom line" numbers that speak directly to residents. In addition, you can use FCA results to respond to specific public concerns.

- **Adopt a Businesslike Approach to MSW Management**. By focusing attention on costs, FCA fosters a more businesslike approach to MSW management. Consumers of goods and services increasingly expect value, which

means an appropriate balance between quality and cost of service. FCA can help identify opportunities for streamlining services, eliminating inefficiencies, and facilitating cost-saving efforts through informed planning and decision-making.

- **Develop a Stronger Position in Negotiating with Vendors**. When considering privatization of MSW services, you can use FCA to learn what it costs (or would cost) to do the work. As a result, FCA better positions public agencies for negotiations and decision-making. FCA also can help communities with publicly run operations determine whether their costs are competitive with the private sector.

- **Evaluate the Appropriate Mix of MSW Services**. FCA gives you the ability to evaluate the net cost of each element of your solid waste system: recycling, composting, waste-to-energy, and landfilling. FCA can help you avoid common mistakes in thinking about solid waste management, notably the error of treating avoided costs as revenues.

- **Fine-Tune MSW Programs**. As more communities use FCA and report the results, you might be able to "benchmark" your operation to similar cases or norms. This comparison can suggest options for "re-engineering" your current operation. Further, when cities, counties, and towns know what it costs to manage MSW independently, they can better identify any savings that might come from working together.

FCA can complement two other practices: *unit-based pricing* (or pay-as-you-throw) programs and *enterprise funds*. Unit-based pricing programs charge solid waste generators based on how much they throw away. They can be an equitable means of recovering the full costs of solid waste management. FCA can help identify a unit pricing rate structure that will generate the revenues needed to cover the costs of providing the service. Enterprise funds are mechanisms used by local governments for activities that can be financed and operated like a private business. FCA is inherent in the concept and operation of enterprise funds, which are intended to cover program costs through a dedicated source of user fees.

FCA is not a substitute for management analysis and decision-making; it is simply a tool to use in gaining information on and reporting the costs of your solid waste program. It can help you answer questions about what certain MSW services cost and why changes to some services don't automatically result in savings on your bottom line. For example, many residents or government officials might think that an increase in your community's recycling rate should translate into a decrease in the costs of solid waste management. Depending on the costs of running your recycling program, as well as fluctuations in the market for recyclables and fixed costs of landfill disposal and waste-to-energy, recycling might or might not be saving your community money. FCA can help identify the costs of recycling, land disposal, and other solid waste services, helping you gain a better picture of the costs of MSW management in your community.

Case in Point
Indianapolis, Indiana

Indianapolis has an excellent credit rating and a solid reputation for having its financial house in order. Yet when the new mayor took office in 1992, he was amazed at what city officials did not know about their budgets. They knew that the city took in more money than it spent but did not know how much any single activity cost. While city officials could detail how much the various department budgets increased annually, they did not know how much it cost to fill one pothole or install a traffic signal.

When city officials started calculating how much it cost to pick up a ton of trash, they uncovered surprising information. They found that there were separate budgets for the garage, trucks, gas, and drivers. As a result, no one knew the full costs of providing the trash collection service.[1]